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EXAMINER	
NELSON, MICHAEL B	

  

ART UNIT	PAPER NUMBER
1783	

  

NOTIFICATION DATE	DELIVERY MODE
06/03/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments of 05/17/10 have been considered but are not persuasive.
2. Applicant argues that Wolf teaches away from the second layer having the refractive index within the claimed range. The examiner maintains (as in the interview) that the language "preferably from approximately" renders the range in Wolf not definite enough to teach away from modifying the range to within the instant range. Applicant focuses on the "should be adjusted language" but the examiner notes that the refractive indexes, in general, of all the layers should be adjusted. The "preferably from approximately" language then further modifies this language to show that the range that follows is only a preferably suggested range.
3. Applicant then persists in arguing that the refractive index would not be adjusted according to the relative amounts of each component in the composite nitride. The examiner maintains that the language from Wolf quoted by the applicant in their arguments adequate reason for one having ordinary skill to have adjusted the refractive index of the composite nitride. The examiner further maintains, as in the previous office action, that this adjustment would have been obvious independent of the teachings of Wolf, which only make the adjustment all the more obvious.
4. Applicant also argues that the intrinsic stress of the composite would be taught away from by Wolf but, as explained in the previous office action, Wolf does not require a particularly low intrinsic stress but merely mentions it as a suggested preference. Applicant also argues that the Wolf considered the Zr composite to exhibit a high intrinsic stress however there is no evidence provided by the applicant to support this assertion nor is there any evidence found in

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Wolf that relates to this assertion. Wolf only mentions, as a preferable and not required aspect of their invention, that low intrinsic stress materials might be beneficial. Wolf does not require low intrinsic stress materials, nor do they list SiZrN as a high intrinsic stress material nor do they explain what qualifies as a low, as opposed to high, intrinsic stress.

5. Applicant also makes new allegations of unexpected results on page 6 of the remarks which relate to examples 1-4 of the specification. However, these examples only compare SiZrN films to SiN films and therefore only show benefits of using SiZrN in general, not using SiZrN at particular atomic ratios. To be more on point, the comparative examples would have to have SiZrN at atomic ratios outside of the claimed range. Applicant also makes general claims to beneficial properties of Examples 6-8, however no specific property is mentioned for the examiner to consider, merely "improve performance." Applicant also references the previous declaration but, as with examples 1-4 of the specification, the only comparison in the declaration is between SiZrN and SiN in general and is therefore not relevant to showing that the particular atomic ratio of Zr produces unexpected results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1783

/MN/  
05/20/10